

REMARKS

Applicants have amended Claims 1, 2, 3, 10, and 17 and therefore, upon entry of this amendment, Claims 1-22 are pending. Applicants respectfully request reconsideration and reexamination of the application.

The drawings were objected to under 37 CFR 1.83(a) as not showing every feature of the invention specified in the claims. Specifically, the "different diffusion regions" is cited as not being shown in the drawings. Applicants respectfully disagree as the elements, such as for example the transistor and the diode string cited in Claim 4, are shown in Figs. 2a, 2b, and 3. Furthermore in accordance with one or more embodiments of the present invention, the present application discloses that the diode string and the transistor are in different diffusion regions, as would be understood by one skilled in the art based on the description and figures. Thus, the requirements under 37 CFR 1.83(a) have been met and Applicants respectfully request that the drawing objection be withdrawn.

Claims 1, 2, 4, 5, 10, 11, 13, and 17 were objected to for informalities. Specifically, Claims 1, 11, and 17 were objected to as having "cascode" misspelled, Claims 2, 5, 10, 13, and 17 were objected to over "reference voltage line" lacking description in the specification, and Claim 4 was

LAW OFFICES OF
MACPHERSON KWOK
CHEN & HEID LLP

2402 Michelson Drive
SUITE 210
Irvine, CA 92612
(949) 752-7040
FAX (949) 752-7029

objected to for the drawings not showing "different diffusion regions" as claimed.

For Claims 1, 11, and 17, Applicants note that "cascode" is spelled correctly and is a well known circuit configuration in the art (e.g., see Background section of the present application). For Claims 2, 5, 10, 13, and 17, a "reference voltage line" is shown in Figs. 1a, 1b, 2a, 2b, and 3 and provides a reference voltage (e.g., ground) as would be understood by one skilled in the art as described for example in the Background and Summary of the present application. For Claim 4, Applicants disagree and refer Examiner to the discussion above with respect to the drawings. Therefore, Applicants respectfully request that the informality objections be withdrawn.

Claims 1-5, 8-14, 16-20, and 22 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,040,968 to Duvvury et al. [herein referred to as "Duvvury"].

Duvvury discloses ESD protection circuits, such as Fig. 3A cited by Examiner where diode D1 is forward biased towards supply voltage Vcc1 and away from transistor M1, while diodes D2 and D3 are disposed between the supply voltage Vcc1 and a second supply voltage Vcc2. As disclosed in Duvvury, the connections discussed in reference to Figs. 3 and 4 are not

LAW OFFICES OF
MACPHERSON KIM
CHEN & HEID LLP

2402 Michelson Drive
SUITE 210
Irvine, CA 92612
(949) 753-7040
FAX (949) 752-7049

practical (col. 4, lns. 60-61) and as explained below quite different than disclosed in the present application.

In contrast in accordance with one or more embodiments of the present invention, a circuit is disclosed having a diode string and a transistor in a cascode configuration to provide ESD protection. At least one diode in the diode string is forward biased from a supply voltage line (for a supply voltage VCC) to the transistor, while at least another diode in the diode string is reverse biased from a reference voltage line (for a reference voltage such as ground) to the supply voltage line and in parallel with the transistor.

Applicants have amended the claims to clarify certain aspects of the present invention. For example, Duvvury does not teach or suggest "wherein the diode string comprises a first diode coupled between the supply voltage line and the transistor and disposed such that the first diode is forward biased from the supply voltage line to the transistor, wherein the first diode is adapted to provide electrostatic discharge protection having a first polarity" as recited in amended Claim 1, "at least a first diode coupled between a supply voltage line and a reference voltage line and having an anode coupled to the supply voltage line, wherein the at least first diode is adapted to protect from electrostatic discharge of a first polarity ... and a transistor coupled between the at

LAW OFFICES OF
MACPHERSON KWOK
CUBEN & HEND LLP

2102 Michelson Drive
SUITE 710
Irvine, CA 92612
(949) 753-7840
FAX (949) 753-7019

least first diode and the reference voltage line" as recited in amended Claim 10, or "providing at least a first diode having an anode coupled to a supply voltage rail to protect from electrostatic discharge of a first polarity; providing a transistor coupled between the at least first diode and a reference voltage rail; and providing at least a second diode coupled to the supply voltage rail and to the transistor to protect from electrostatic discharge of a second polarity, wherein the at least first diode and the transistor are implemented in a cascode configuration" as recited in amended Claim 17.

Therefore, Applicants respectfully submit that Claims 1, 10, and 17 patentably distinguish over Duvvury and that corresponding dependent claims are also distinguishable for at least the same reasons. Therefore, Applicants respectfully request that the rejection under 35 U.S.C. § 102(b) of Claims 1-5, 8-14, 16-20, and 22 be withdrawn.

Claims 6, 7, 15, and 21 were rejected under 35 U.S.C. § 103(a) as being obvious over Duvvury in view of Applicant's admitted prior art [herein referred to as "AAPA"]. Duvvury fails to teach or suggest certain aspects of the present invention, as discussed above in reference to Claims 1, 10, and 17, and AAPA fails to cure the deficiencies of Duvvury. Therefore, Applicants respectfully submit that Claims 1, 10,

LAW OFFICES OF
MACPHERSON KWOK
CHEN & HIRD LLP

2403 Melancon Drive
SUITE 210
IRVINE, CA 92612
(949) 752-7040
FAX (949) 752-7049

and 17 patentably distinguish over Duvvury in view of AAPA and that corresponding dependent claims are also distinguishable for at least the same reasons. Therefore, Applicants respectfully request that the rejection under 35 U.S.C. § 103(a) of Claims 6, 7, 15, and 21 be withdrawn.

Accordingly, Applicants respectfully submit that Claims 1-22 are in proper form for allowance. Reconsideration and withdrawal of the rejections are respectfully requested and a timely Notice of Allowance is solicited.

If there are any questions regarding any aspect of the application, please call the undersigned at (949) 752-7040.

Certificate of Transmission

I hereby certify that this correspondence is being facsimile transmitted to the Commissioner for Patents, Fax No. 571-273-8300 on the date stated below.

 July 13, 2006
Tina Kavanaugh

Respectfully submitted,



Greg J. Michelson
Attorney for Applicant(s)
Reg. No. 44,940

LAW OFFICES OF
MACPHERSON KWOX
CHEN & HEID LLP

1402 Michelson Drive
SUITE 210
Irvine, CA 92612
(949) 752-7040
FAX (949) 752-7049

-12- Serial No. 10/808,627